



ecology and environment, inc.

International Specialists in the Environment

111 West Jackson Boulevard

Chicago, Illinois 60604

Tel (312) 663-9415 Fax (312) 663-0791

US EPA RECORDS CENTER REGION 5



513038

M E M O R A N D U M

DATE: December 27, 1995

TO: Dean Tiebout, E & E Project Manager, E & E,
Chicago, Illinois

FROM: David Hendren, TAT Analytical Services Manager,
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, TAT QA Reports Manager, E & E,
Chicago, Illinois

SUBJECT: Inorganic Data Quality Review for Arsenic, Cadmium,
Copper, Nickel, Lead, and Zinc, Gateway Initiative,
East St. Louis, St. Clair County, Illinois

REFERENCE: Project TDD T05-9512-001 Analytical TDD T05-9512-801
Project PAN EIL0903VAA Analytical PAN EIL0903AAA

The data quality assurance (QA) review of 20 soil samples collected from the Gateway Initiative site is complete. The samples were collected on December 11, 1995, by Ecology and Environment, Inc. (E & E) under a Technical Assistance Team (TAT) Technical Directive Document (TDD). The samples were submitted to Ecology and Environment Inc., Analytical Services Center, Lancaster, New York. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 6010. All results are reported on a dry-weight basis.

Sample Identification

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
1QSS01	37296
1QSS02	37297
1QSS03	37298
1QSS04	37299
1QSS05	37300
1QSS06	37301
1QSS07	37302
1QSS08	37303
1QSS09	37304
1QSS09D	37305
1QSS10	37306

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
1QSS11	37307
1QSS12	37308
2QSS01	37309
2QSS02	37310
2QSS03	37311
2QSS03D	37312
2QSS04	37313
2QSS05	37314
2QSS06	37315

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 11, 1995, and analyzed on December 15, 1995. This is within the six-month limit.

II. Calibration:

• Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90% to 110%, as required.

• Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90% to 110% recoveries, as required.

III. Blanks: Acceptable

A method blank (preparation blank) was analyzed with each analytical batch. Trace levels of lead were detected in the preparation blank; all sample values for lead exceeded ten times the blank level and no qualification was required. No target analytes were detected in the calibration blanks.

IV. Instrument Interference Check Samples (ICSs): Acceptable

The ICSs were analyzed and all parameters were within established quality control limits.

Gateway Initiative
Project TDD T05-9512-001
Analytical TDD T05-9512-801
Page 3

V. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.



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Sample Identification

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
2QSS07	37351
2QSS08	37352
2QSS09	37353
2QSS10	37355
2QSS11	37356
2QSS12	37357
2QSS13	37358
2QSS14	37359
2QSS15	37360
2QSS15D	37361
2QSS16	37362
2QSS17	37363

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
2QSS18	37364
2QSS19	37365
2QSS20	37366
4QSS01	37368
4QSS02	37369
4QSS03	37367
4QSS04	37370
4QSS05	37371

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 11 and 12, 1995, and analyzed on December 15, 1995. This is within the six-month limit.

II. Calibration:

• Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90% to 110%, as required.

• Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90% to 110% recoveries, as required.

III. Blanks: Acceptable

A method blank (preparation blank) was analyzed with each analytical batch. Trace levels of lead were detected in the preparation blank; all sample values for lead exceeded ten times the blank level and no qualification was required. No target analytes were detected in the calibration blanks.

IV. Instrument Interference Check Samples (ICSS): Acceptable

The ICSSs were analyzed and all parameters were within established quality control limits.

Gateway Initiative
Project TDD T05-9512-001
Analytical TDD T05-9512-801
Page 3

V. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.



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Sample Identification

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
3QSS01	37461
3QSS02	37462
4QSS05D	37378
4QSS06	37379
4QSS07	37380
4QSS08	37381
4QSS09	37382
4QSS10	37383
4QSS11	37384
4QSS12	37385
4QSS13	37386

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
4QSS14	37387
4QSS15	37388
4QSS15D	37389
4QSS16	37390
4QSS17	37391
4QSS18	37392
4QSS19	37393
4QSS20	37394
4QSS21	37395

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 12 and 13, 1995, and analyzed on December 17 and 18, 1995. This is within the six-month limit.

II. Calibration:

• Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90% to 110%, as required.

• Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90% to 110% recoveries, as required.

III. Blanks: Acceptable

A method blank (preparation blank) was analyzed with each analytical batch. No target analytes were detected in the method or calibration blanks.

IV. Instrument Interference Check Samples (ICSS): Acceptable

The ICSSs were analyzed and all parameters were within established quality control limits.

Gateway Initiative
Project TDD T05-9512-001
Analytical TDD T05-9512-801
Page 3

V. Overall Assessment of Data For Use: Acceptable

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Sample Identification

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
3QSS03	37463
3QSS04	37464
3QSS04D	37365
3QSS05	37366
3QSS06	37367
3QSS07	37368
3QSS08	37369
3QSS09	37370
3QSS09D	37371
3QSS10	37372
3QSS11	37373

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
3QSS12	37374
3QSS13	37375
3QSS14	37376
3QSS15	37377
3QSS16	37378
3QSS17	37379
3QSS18	37380
3QSS19	37381
3QSS19D	37382

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 13, 1995, and analyzed on December 19, 1995. This is within the six-month limit.

II. Calibration:

• Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90% to 110%, as required.

• Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90% to 110% recoveries, as required.

III. Blanks: Acceptable

A method blank (preparation blank) was analyzed with each analytical batch. A trace level of lead was detected in the preparation blank; all sample values exceeded ten times the preparation blank level and qualification was not required. No target compounds were detected in the calibration blanks.

IV. Instrument Interference Check Samples (ICSS): Acceptable

The ICSSs were analyzed and all parameters were within established quality control limits.

V. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.²



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Project PAN EIL0903VAA Analytical PAN EIL0903AAA

The data quality assurance (QA) review of eight soil samples collected from the Gateway Initiative site is complete. The samples were collected on December 13, 1995, by Ecology and Environment, Inc. (E & E) under a Technical Assistance Team (TAT) Technical Directive Document (TDD). The samples were submitted to Ecology and Environment Inc., Analytical Services Center, Lancaster, New York. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 6010. All results are reported on a dry-weight basis.

Sample Identification

<u>TAT</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
2QSS21	37488
2QSS22	37489
2QSS23	37490
3QSS20	37483
4QSS22	37484
4QSS23	37485
4QSS24	37486
4QSS25	37487

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 13, 1995, and analyzed on December 19, 1995. This is within the six-month limit.

II. Calibration:

• Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90% to 110%, as required.

• Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90% to 110% recoveries, as required.

III. Blanks: Acceptable

A method blank (preparation blank) was analyzed with each analytical batch. A trace level of lead was detected in the preparation blank; all sample values exceeded ten times the preparation blank level and qualification was not required. No target compounds were detected in the calibration blanks.

IV. Instrument Interference Check Samples (ICSS): Acceptable

The ICSSs were analyzed and all parameters were within established quality control limits.

V. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.

